D'Ulizia Arianna; Ferri Fernando; Grifoni Patrizia, **Moving GeoPQL: a Pictorial Language Towards Spatio-Temporal Queries**, Geoinformatica, Kluwer Academic Publishers - Dordrecht 2012.

Abstract: Nowadays, two of the main challenges involving spatio-temporal databases concern the integration of their spatial and temporal features to store and query spatial objects changing over time, and the development of a simple and friendly language to query spatio-temporal data. In this paper we gather these two challenges by proposing Moving GeoPQL, a language defined in order to express spatio-temporal queries, extending the Geographical Pictorial Query language (GeoPQL). The proposed evolution is based on the concept of temporal layer that allows specifying the spatial configuration of moving objects in a time interval. More layers allow representing changes in terms of spatial configurations. Some examples of query formulation and system operation are described in the article. Finally, an experiment has been carried out for evaluating the usability of the Moving GeoPQL system. Results of this experiment showed that it facilitates the spatio-temporal query formulation since it is more user friendly and ease to use compared to textual query languages.